



#### प्रसार भारती/ PRASAR BHARATI

भारत का लोक सेवा प्रसारक/ INDIA'S NATIONAL PUBLIC SERVICE BROADCASTER आकाशवाणी महा निदेशालय /DIRECTORATE GENERAL: ALL INDIA RADIO योजना और विकास एकक आकाशवाणी भवन, संसद मार्ग, नई दिल्ली-110001 P & D UNIT, AKASHVANI BHAWAN, SANSAD MARG, NEW DELHI-110001 [क्रय अनुभाग /PURCHASE SECTION]

No. 01(34)11/NIT-32/2019-D(P)/ 25!

Dated: 26.06.2019

#### Notice inviting e-Tender No. 32/2019

E-tenders are invited for and on behalf of Director General, All India Radio under two bid systems for Supply/SITC/SETC of the following Equipments from firms registered with DGS&D/NSIC and from reputed manufacturers/authorized agents and stockiest dealing with the equipments as detailed below:

| SI.<br>No. | Tender Ref. no.   | Description of Stores   | Qty.            | Estimated Cost of work/ Procurement (Rs. in Lakh) | EMD<br>(Rs. In<br>Lakh) | Tender<br>Submission<br>Date/Time<br>(online) | Tender<br>Opening<br>Date/Time<br>(Online) |
|------------|---|---|-----------------|---|-------------------------|---|--|
| 1          | No. 12(30)01<br>/2019-D(P)/<br>658/ D(P-S)<br>Cell              | Supply, Erection, Testing<br>and Commissioning<br>(SETC) of FM Combiners<br>& RF Cables etc. at Jaipur  | (1)<br>Place    | .368.79   | 7.38                    | 08.08.2019<br>(02:30 PM)                      | 08.08.2019<br>(03:00 PM)                   |
| 2          | No.12(32)01/F<br>M Antenna /<br>2019/D(P)/660<br>/D(P-S) Cell   | Supply of 2 Bay Vertically<br>Polarized Side Mount<br>VHF FM Antenna.   | (100)<br>Nos.   | 230.67  | 4.62                    | 08.08.2019<br>(02:30 PM)                      | 08.08.2019<br>(03:00 PM)                   |
| 3          | No. 12(33)10<br>/Processor/<br>2019/D(P)/<br>661/D(P-S)<br>Cell | Supply of Stereo FM<br>Digital Audio Broadcast<br>Processor.  | (32)<br>Nos.    | 139.27  | 2.79                    | 13.08.2019<br>(02:30 PM)                      | 13.08.2019<br>(03:00 PM)                   |
| 4          | No. 12(35)01<br>/RF Cable/<br>2019/D(P)/<br>662/D(P-S)<br>Cell  | Supply of 7/8" & 3/8" RF<br>Coaxial Foam Dielectric<br>Cable and Accessories<br>(for VHF FM Transmitter<br>Setup)   | (100)<br>Places | 60.00   | 1.20                    | 13.08.2019<br>(02:30 PM)                      | 13.08.2019<br>(03:00 PM)                   |
| 5          | No. 12(36)01/<br>FMTr/ 2019/<br>D(P)/ 663/<br>D(P-S) Ceil       | Supply of 100 W Digital Compatible VHF FM Solid-State MOSFET Technology Based Broadcast Transmitter in (1+1) configuration alongwith pre-wired Rack including Programme Input & Monitoring equipments and other associated equipments/items | (100)<br>Places | 1280.90   | 25.60                   | 20.08.2019<br>(02:30 PM)                      | 20.08.2019<br>(03:00 PM)                   |

Contd...2

26/8/2019

#### NOTE:

- i. The bid forms, General Instructions to Bidders and other details including amendments/ changes can be viewed/ downloaded from the website <a href="https://www.tenderwizard.com/PB">www.tenderwizard.com/PB</a>.
- ii. Tender notice is also available on the AIR website <a href="www.allindiaradio.gov.in">www.allindiaradio.gov.in</a> (using the link: Tender) and CPP PORTAL on website <a href="http://eprocure.gov.in">http://eprocure.gov.in</a>.

2021/019

(हदेश कुमार/ Hirdesh Kumar)

उप निदेशक (अभि.)/ Dy. Director (Engg.)

कृते महा निदेशक आकाशवाणी/for Director General: All India Radio

E-mail: <u>depurchase@prasarbharati.gov.in</u>

Tele:-011-2342 1040

#### PRASAR BHARATI

(India's Public service Broadcaster)

# DIRECTORATE GENERAL: ALL INDIA RADIO (PLANNING & DEVELOPMENT UNIT)

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SPECIFICATION FOR SUPPLY OF 2-BAY VERTICALLY POLARIZED SIDE MOUNT VHF FM ANTENNA-100 Places

#### SUMMARY OF CONTENTS:

| S. No. | Description   | Page<br>No. |
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| 4.     | Section 2.0, Technical Specifications   | 8           |
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| 7.     | Section 4.0 (A), Schedule of Requirements/Materials (Un-Priced) (Optional)  Section 4.0 (B), Schedule of Requirements/Materials (Un-Priced) (Optional)  Annexure-I- Performa for information about Local Office for after sales support   | 11          |
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## A. ESSENTIAL REQUIREMENT FOR THE TENDER:

- 1. (i) The tenderer should submit Schedule of Requirements/Materials of Supply (un-priced) in the same format as given in Section-4.0 (A&B) of All India Radio Specifications in the technical bid, failing which the tender shall be considered incomplete and is liable to be rejected.
  - (ii) It is also mandatory to mention Make & Model of the offered equipment in the Schedule of Requirements/Materials of Supply, failing which the tender shall be considered incomplete and is liable to be rejected.
- Each statement of this specification has to be complied with & supported by printed technical literature, technical data sheets, schematic drawings and technical manuals from the manufacturer of the equipment by the tenderer, to assess the merit of the offer without which the tender will be considered incomplete and is liable to be rejected.
- 3. The tenderer should submit the tender offer to All India Radio in the format given below, section wise & clause wise, in respect of all the sections of technical specifications. The OEM/tenderer must provide the page number reference, in column (4) of the table given below, of the Technical bid clearly indicating the volume number also, if any, for each supporting document to verify the parametric values shown in the technical specifications compliance statement, to assess the full merit of the offer, failing which tender shall be considered incomplete and is liable to be rejected.

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Manzoor Ali, ADE

(on leave)

Rajendra Nahar, DDE

Aditya Chaturvedi, DDG (E)

| S. No. of AIR Specifications (Section wise & Clause wise) | Details of All India<br>Radio Specifications<br>(Part/ Section wise &<br>Clause wise) | Compliance<br>(Yes/No) | The page No. of the tender offer, where the information/ supporting document is available. | Remarks |
|---|---|------------------------|--|---------|
| (1)   | (2)   | (3)                    | (4)  | (5)     |
| A. Essential requirement                                  |   |                        |  |         |
| for the tender  |   |                        |  |         |
| B. Essential  |   |                        |  |         |
| eligibility criteria for                                  |   |                        |  |         |
| tenderer  |   |                        |  |         |
| Section-1.0   |   | ł                      |  |         |
| Clause wise   |   |                        |  |         |
| Section-2.0   |   |                        |  |         |
| Clause wise   |   |                        |  | ļ       |
| Section-3.0   |   |                        |  |         |
| Clause wise   |   |                        |  |         |
| Section-4.0 (A&B) Clause wise                             |   |                        |  |         |

- The tenderer should also quote the rate/cost of individual items in the tender offer while submitting the offer for spares (OPTIONAL) in commercial bid.
- 5. The complete technical specifications (Section wise & Clause wise) compliance statement along with Schedule of Requirements/Materials (un-priced) must be signed & stamped on each page by the respective Original Equipment Manufacturer (OEM) in the tender document including the clarifications, if any, asked by AIR, failing which the tender shall be considered incomplete and is liable to be rejected.

In case tender offer is from other than the Original Equipment Manufacturer, the tenderer must also sign & stamp each page of the complete Technical specifications compliance statement (Section wise & Clause wise) including the clarifications, if any, asked by AIR, failing which the tender shall be considered incomplete and is liable to be rejected. The OEM & tenderer should mention their name in CAPITAL LETTERS & designation of the signatories, full address with pin code, phone number, fax number, e-mail addresses etc.

- 6. All the volumes of the entire technical bid must be page numbered.
- 7. The authorization and guarantee must be given by respective Original Equipment Manufacturer (OEM) on their letter head pad duly signed & stamped on each page. In case tender offer is from other than the Original Equipment Manufacturer, the tenderer must also give guarantee on their letter head pad duly signed & stamped on each page, failing which the tender shall be considered incomplete and is liable to be rejected without any notice/back reference. Guarantee shall be as per the format given in clause 1.7 of Section-1.0.
- 8. In case tender offer is from other than the Original Equipment Manufacturer, the tenderer should also furnish a certificate from the OEM that the tenderer can quote items of the OEM directly, failing which the tender shall be considered incomplete and is liable to be rejected without any notice/back reference.
- 9. Any change in the AIR technical specifications format or language or in parameters or of any other nature including the deletion of technical specifications clause, words, lines in the technical specifications compliance statement by the OEM/ tenderer will not be acceptable to AIR and the tender is liable to be rejected.

Manzoor Áli, ADE

(on leave)

Rajendra Nahar, DDE

- Public Procurement (Preference to Make in India) Order No. P-45021/2/2017-B.E-II dated 15.06.2017
  of Government of India, Ministry of Commerce and Industry, Department of Industrial Policy and
  Promotion shall be applicable.
- 11. Optional items will not be considered for ranking purpose.

## B. ESSENTIAL ELIGIBILITY CRITERIA FOR TENDERER:

- (a) The tenderer should either be the OEM of VHF FM Antenna or their authorized representative/dealer.
- (b) (i) The OEM of the VHF FM Antenna must have an experience of manufacturing and supplying 2-Bay/4-Bay/6-Bay/8-Bay/16 Panel VHF FM Antenna of power rating 500 W or more for at least last 5 years. Documentary evidence to support this must be provided.
  - (ii) The OEM should have supplied VHF FM Antenna to reputed/public broadcasters. The OEM must provide the details of past supply record (in the format given below) for at least 50 Nos. of 2-Bay/4-Bay/6-Bay/8-Bay/16 Panel VHF FM Antenna of power rating 500 W or more, supplied during last five years ending last day of the month previous to the one in which the tender is invited.

|                 | as  | Name of the broadcaster with full postal address including e-mail address to whom VHF FM antenna was supplied, for getting feedback on VHF FM antenna performance |     | FM antenna Model and | VHF<br>Type,<br>length | date, | Order<br>with<br>reference |
|-----------------|-----|---|-----|----------------------|------------------------|-------|----------------------------|
| (1) (2) (3) (4) | (3) | (4)   | (3) | (2)                  |                        | )     | (1                         |

- (ii) All India Radio reserves the right to get performance feedback of the VHF FM antenna from any of the above broadcasters named by the tenderer/OEM.
- (iii) Copies of orders for supply and completion certificates/delivery challans/invoice of at least 10 Nos., out of the 50 Nos. of VHF FM antenna submitted by the tenderer in above format, are also to be enclosed by the tenderer.
- (c) In case the tenderer is the authorized representative/dealer, the tenderer must be an authorized representative/dealer of any OEM of VHF FM antenna/TV antenna for last three years or more OR must be in the business of sales and supply of VHF FM antenna/TV antenna for last three years or more. Documentary evidence to support this must be provided.
- (d) The OEM of the offered VHF FM antenna must have his local office/authorized representative/dealer in India for after sales support. A certificate as per Annexure-I duly signed by the OEM as well as local office/authorized representative/dealer must be submitted with the offer. Copy of Agreement/MoU executed between OEM and their authorized representative/dealer duly signed by both must also be submitted with the offer.

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#### SECTION - 1.0

#### GENERAL SPECIFICATIONS:

- 1.0 2-Bay Vertically Polarized Side Mount VHF FM Antenna as per AIR specification shall be used round the clock for continuous operation without any interruption in VHF FM broadcast service at AIR station.
- 1.1 Please refer tender documents for general terms and conditions of contract for supply including all the commercial aspects like; Packing and packing list, Insurance and Marine Risk etc. Payment terms, Penalty/Compensation for delay, Damages and liabilities, Time Period and Extension for Delay, Foreclosure of contract due to Abandonment or Reduction in scope of supply, Cancellation of contract in full or part, Recovery of security deposit, Performance Guarantee, Unsatisfactory workmanship, Damages incurred during transit, tenderer liable for damages, Defects, Recovery of compensation, Ensuring payment and amenities, tenderer to indemnify Government against Patent Rights, Release of security deposit, Safety Code, insurance from manufacturer's works/factory to respective site etc. i.e. in totality.

#### 1.2 INSPECTION:

- a. 2-Bay Vertically Polarized Side Mount VHF FM Antenna will be accepted on the basis of OEM's test certificates (as per AIR specifications) duly stamped and signed by respective OEM on their letterhead, failing which test certificates will be considered incomplete and equipment offered by the firm is liable to be rejected.
- b. The complete Acceptance Test Procedure/Protocol (ATP) will be prepared by the respective OEM of the equipment/items as per Section-4.0 (A&B) and submitted to DDG (E-FM), P&D Unit, DG: AIR for approval within 15 days of issue of Acceptance of Tender. The approved ATP shall form the basis for OEM test certificate of actual performance measurements/inspection to be carried out by OEM. AIR has the right to include other technical parameters in ATP submitted by OEM within the ambit of specification of the product offered.

#### 1.3 INFORMATION TO BE SUPPLIED WITH THE TENDER:

- (i) The complete technical specifications (Section wise & Clause wise) compliance statement alongwith Schedule of Requirements/Materials (un-priced) duly signed & stamped on each page by the respective Original Equipment Manufacturer (OEM) and countersigned by the tenderer as per the format given above in clause A (3).
- (ii) Complete printed technical literature/technical data sheet/schematic drawings/detailed information including Technical Manual of 2-Bay. Vertically Polarized Side Mount VHF FM Antenna as per Section-4.0 (A&B) from the respective Original Equipment Manufacturer (OEM) in support of compliance statement should be furnished, to assess the full merit of the offer, without which the tender offer will be considered incomplete and is liable for rejection.
- (iii) Detailed Schedule of Requirements/Materials (un-priced) for the supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna should be in conformity with Section-4.0 (A&B) without any change in the format, failing which, the tender will be considered incomplete and is liable for rejection. The tenderer must quote all items.
- (iv) Descriptive information and complete details of each equipment offered shall be given by the tenderer.
- (v) Country of Origin, Make, Type & Model of all the offered items should be mentioned including the name & address of their vendors.

1.4 INFORMATION TO BE SUPPLIED BY THE TENDERER WITHIN ONE MONTH AFTER ISSUE OF ACCEPTANCE OF TENDER:

One set of Technical Manuals (for Installation, Testing, Commissioning, Operation & Maintenance,

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including theory of operation, circuit description and fault diagnosis) COLOUR printed and duly bound for 2-Bay Vertically Polarized Side Mount VHF FM Antenna alongwith soft copy on CD must be supplied to "DDG (E-FM), P & D Unit, DG: AIR, New Delhi-110001".

1.5 INFORMATION TO PRECEDE DESPATCH OF EQUIPMENT:

Following information should be supplied to the DDG (E-FM), P & D Unit, DG:AIR and each of the consignee prior to dispatch of Equipment:

a) Detailed list of equipment under dispatch.

b) Photograph showing location of various units/sub units with item numbers marked thereon.

1.6 INFORMATION TO BE SUPPLIED ALONGWITH EQUIPMENT:

Technical manuals (for Installation, Testing, Commissioning, Operation & Maintenance, including theory of operation, circuit description and fault diagnosis) COLOUR printed and duly bound for 2-Bay Vertically Polarized Side Mount VHF FM Antenna and OEM test certificate with soft copy on CD shall be supplied as per Section-4.0 (A&B).

1.7 GUARANTEE:

The tenderer shall submit with his tender an undertaking to accept the following guarantees: (This Guarantee clause is applicable to all the equipments/items mentioned in Schedule of Requirements/Materials in Section-4.0 (A&B)}.

- (i) A guarantee that the equipment supplied will be in accordance with these specifications, varied only to the extent stated in his tender and agreed to in the contract.
- (ii) A guarantee to make good within 7 days (from the date of first intimation to OEM/tenderer) at tenderer's expense any component which becomes defective under normal operating conditions for 60 months from the date of supply. If the tenderer failed to rectify the fault within the stipulated period of 7 days, the guarantee period would be extended corresponding to the outage period.
- (iii) A guarantee to supply all components for a period of ten years from the date of supply, at rates at which these are being supplied by the firm to other customers and also should match prices of original manufactures of these components prevailing at that time.
- (iv) If at any stage during next 10 years, the manufacturer stops production of this model of VHF FM Antenna, the firm shall intimate All India Radio in advance to enable the latter to stock the critical items.

1.8 LANGUAGE/UNITS:

All information supplied by the tenderer & all markings, notes, designation on the drawings & associated write-ups shall be in "English language" only.

All dimensions, units on drawings, all references to weights, measures & quantities shall be in SI Units.

#### 1.9 DELIVERY PERIOD OF EQUIPMENT:

i. For Indian Bidders:

Supply will have to be completed within Three months from the date of Acceptance of Tender or Three months from the date of the Decision Letter from WPC(wherever is required) in respect of RF equipment, provided by AIR, whichever is later.

ii. For Foreign Bidders:

Supply will have to be completed within Three months from the date of Opening of Letter of Credit

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#### 1.10 PACKING AND PACKING LISTS:

All the equipment should be securely and properly packed to withstand transit hazards. Equipment packing shall be fit for sea freight and incorporate adequate protection against ingress of moisture. Packing slips giving details of the items contained in each package shall be placed inside the package in a water proof envelop to enable easy identification and should contain cross references to item/part numbers of installation drawings/components lists. Copies of packing slips and other details should be sent separately to respective consignee and also to the Dy. Director General (E-FM), P & D Unit, DG; AIR, New Delhi.

#### 1.11 INSURANCE AND MARINE RISKS ETC:

Please refer to commercial terms.

#### 1.12 MAINTENANCE SUPPORT AND SPARES:

- (a) The minimum recommended essential spares shall be quoted separately by the tenderer.
- (b) The minimum recommended essential spares may be based on predicted rate of failure.
- (c) In case, the tenderer quotes the optional items as 'a Set', the details of the components/items offered in the 'Set' must be spelt out clearly including their Make & Model and quantity.

#### 1.13 ESSENTIAL REQUIREMENT FOR LOCAL OFFICE/AUTHORIZED REPRESENTATIVE/ DEALER:

- (a) The OEM should have complete setup for maintenance/repair of the offered equipments/items in India, either of its own or through local office/authorized representative/dealer.
- (b) The local office/authorized representative/dealer will be the nodal point for resolving issues related to after sales support. It is the responsibility of local office/authorized representative/dealer to arrange the repair/replacement of faulty items. Any module of the offered equipments/ items requiring repairs will be repaired at site. If it is not feasible to repair the module at site, the same will be collected from the site by local office/authorized representative/dealer that will arrange repairs locally. The cost of transportation, repairs etc. shall be borne by the tenderer during the guarantee period.
- (c) After sales support for the repairs/maintenance of offered equipments after the completion of guarantee period, shall also be provided by the OEM of the offered equipments/ items through their local office/authorized representative/dealer in India.
- (a) The details of technical facilities available with local office/authorized representative/dealer for after sales support such as test bench, necessary test & measuring equipment and photographs thereof, must be provided in the technical bid.
- (e) At the discretion of AIR, AIR representative(s) may visit the works of local office/authorized representative/dealer of OEM in India to ensure/verify that adequate technical infrastructure is available for after sales service for timely resolving the issues related to attending/replacing the equipments. Tenders from the tenderers who failed to meet these criteria shall be considered incomplete and is liable to be rejected.

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#### SECTION-2.0

#### TECHNICAL SPECIFICATIONS:

#### 2.0 ANTENNA SYSTEM

- 2.1 The 2-Bay Vertically Polarized Side Mount VHF FM Antenna along with antenna clamp suitable for mounting on class C G.I pipe of size 50 NB, shall be supplied with each set for 100 places.
- 2.2 The Antenna will be mounted on the Guyed Mast/Self Supporting tower of AIR.
- 2.3 Following documents shall be supplied along with the Tender:
  - a. VSWR curve for complete Frequency range i.e. 88 MHz-108 MHz.
  - b. Horizontal Radiation Pattern.
  - c. Vertical Radiation Pattern.
- 2.4 Brief Specifications of Antenna to be supplied are given below:

| S. No. | Parameters   | Specifications  |
|--------|--|---|
| 2.4.1  | Operating Frequency Range  | 88 MHz -108 MHz   |
| 2.4.2  | Nominal Impedance  | 50 Ω unbalanced   |
| 2.4.3  | VSWR   | Better than 1.2: I over the frequency range from 100 MHz to 105 MHz and to be optimized to 1.1: I for operating frequency (to be intimated later at the time of placement of order) |
| 2.4.4  | Power Handling Capacity (Total)  | ≥ 500 Watts   |
| 2.4.5  | Polarization   | Vertical  |
| 2.4.6  | Gain w.r.t. Half Wave Dipole   | ≥ 4.5 dBd   |
| 2.4.7  | Lightning Protection   | All metal parts to be DC grounded.  |
| 2.4.8  | Input Connector of main power divider(splitter) of antenna system          | 7/16 DIN Female connector suitable for connecting 7/8" RF Coaxial foam dielectric cable fitted with 7/16 DIN Male connector.  |
| 2.4.9  | Output Connectors of main power<br>divider (Splitter) of antenna<br>system | 7/16 DIN connector  |
| 2.4.10 | Branch feeder cables and Clamps<br>for mounting Dipoles                    | Suitable Branch feeder cable fitted with 7/16 DIN connector at both ends and Clamps to be supplied with the Antenna.  |
| 2.4.11 | Input Connector of dipoles   | 7/16 DIN connector  |
| 2.4.12 | Maximum Wind Speed   | 198 km/Hour   |
| 2.4.13 | Ambient Temperature  | -5°C to 55 °C   |
| 2.4.14 | Humidity   | 95% non-condensing  |
| 2.4.15 | Rainfall   | Moderate to heavy   |

2.5 Inter-bay feeding/Feed System: Full details of Feeding arrangement and the engineering drawings with dimensions along-with the details of inter-connecting RF coaxial foam dielectric

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cables/rigid lines etc. to be submitted with the tender. The entire feeding system should be adequately protected against heavy rainfall, extreme daily temperature variance.

All technical parameters are to be supported by printed technical literature, technical data sheets & technical manuals from the OEM by the tenderer to assess the merit of the offer, failing which the tender shall be considered incomplete and is liable to be rejected. The tenderer should make a detailed offer.

- 2.6 External material: Dipoles will be made of stainless steel or Marine Brass. Power Dividers & Rigid feed lines will be made of Marine Brass or Copper. All electrical contacts must be silver plated. Clamps shall be constructed of hot dip galvanized Steel/stainless steel. All fasteners will be of Stainless Steel or High Tensile non corrosive material.
- 2.7 Internal material: Inner lines of Dipoles will be of copper or Brass. All electrical contacts will be silver plated. All inners and bullets will be made of Beryllium copper and silver plated. Insulators will be made of virgin Teflon.
- 2.8 All joints to be made completely air tight & water tight.

#### SECTION-3.0

#### **INSPECTION:**

2-Bay Vertically Polarized Side Mount VHF FM Antenna will be accepted on the basis of OEM's test certificate of actual performance measurements as per AIR specification before dispatch to All India Radio and receipt of equipments/items at site in good condition.

The Original Equipment Manufacturer's (OEM) test certificates shall be duly signed & stamped on the letter head of the OEM, failing which Original Equipment Manufacturer's (OEM) test certificates will be considered incomplete and equipment offered by the tenderer is liable to be rejected.

Following information should also form part of OEM test certificate for each VHF FM antenna.

- 1. Make, Type, Model and Country of Origin of the accessories and spares.
- 2. Measurements of all parameters as per Section 2.0 of Technical Specification.

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(on leave)
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#### SECTION-4.0 (A)

# SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) [FOR SUPPLY OF ONE SET OF 2-BAY VERTICALLY POLARIZED SIDE MOUNT VHF FM ANTENNA]

| S. No. | Description  | Make         | Model  | Qty.              |
|--------|--|--------------|--|-------------------|
| 1.     | Supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system including power divider, branch feeder cables, connectors, clamps for mounting dipoles etc., as per AIR  |              |  | 1 Set<br>Complete |
|        | specification.  Any other accessories offered for the completeness of the system.  | <del> </del> | †  | 1 Lot             |
| 3.     | Technical manuals (for Installation, Testing, Commissioning, Operation & Maintenance, including theory of operation, circuit description and fault diagnosis) COLOUR printed and duly bound for 2-Bay Vertically Polarized Side Mount VHF FM Antenna system as per distribution given below alongwith one soft copy on CD. |              |  |                   |
| 3.1    | For DDG (E-FM), P & D Unit, DG: AIR, New Delhi- 110001  (Within one month of issue of Acceptance of Tender)  (irrespective of number of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system to be ordered)   |              |  | 1 Set             |
| 3.2    | For Consignee  |              |  | 2 Sets            |
| 3.3    | {To be supplied along with the equipment}  For the following Offices/Officers, Technical manuals are to be supplied along with the equipment as per distribution given below) (irrespective of number of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system to be ordered)  |              |  | 13 Sets           |
|        | (i) DDG (E-FM), P&D Unit, DG:AIR -1 Set  |              |  |                   |
|        | (ii) Zonal Office (Project Wing)<br>(For SZ, WZ, NZ & EZ) -4 Sets  |              |  |                   |
|        | (iii) Zonal Office (Maintenance Wing) (For SZ, WZ, NZ & EZ) -4 Sets (iv) DDG (E-TM), DG: AIR -1 Set  |              | <del> </del>                                     |                   |
| _      | (v) Technical Library, P&D Unit, DG:AIR -1 Set   |              |  |                   |
|        | (vi) NABM, New Delhi -1 Set  |              |  | <u> </u>          |
|        | (vi) R&D, AIR & DD, New Delhi -1 Set   |              | <del>                                     </del> |                   |
|        | Total -13 Sets   | <u> </u>     | _]   |                   |

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Autya chaturvedi, DDG (E)

#### SECTION-4.0 (B)

## SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) (OPTIONAL) (Not to be considered for Ranking) {The tenderer must quote all items}

| S. No. | Description                  | Make     | Model | Qty.     |
|--------|------------------------------|----------|-------|----------|
| 1.     | 7/16" DIN Connector (Male)   |          |       | 1 No.    |
| 2.     | 7/16" DIN Connector (Female) |          |       | 1 No.    |
| 3.     | Power divider                |          |       | l No.    |
|        |                              | .        |       | <u></u>  |
| -      |                              |          | _     | <u> </u> |
|        |                              | ļ        |       |          |
|        |                              | <u> </u> |       |          |

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(on lean) Rajendra Nahar, DDE Adity Madurvedi, DJG (E)

#### ANNEXURE-I

## PERFORMA FOR INFORMATION ABOUT LOCAL OFFICE /AUTHORIZED REPRESENTATIVE/ DEALER IN INDIA FOR AFTER SALES SUPPORT

| l.    | Address of local office/authorized representa  | tive/dealer     |                                  |  |  |
|-------|--|-----------------|----------------------------------|--|--|
|       | Telephone (Landline) No.   |                 |                                  |  |  |
|       | Mobile No.   |                 |                                  |  |  |
|       | E-mail Address   |                 |                                  |  |  |
| 2.    | Address for communication (if different)   |                 |                                  |  |  |
| 3.    | Legal Status ( local office/authorized representative/dealer )   |                 |                                  |  |  |
| 4.    | Name, address, contact number (Mobile numail address of local office representative/dealer                   |                 |                                  |  |  |
| 5.    | Brief details of Technical facilities available sales support:   | le for after    |                                  |  |  |
|       | The details of technical facilities available office/authorized representative/dealer for                    | after sales     |                                  |  |  |
|       | support such as test bench, necessary test & equipment and photographs thereof, must b in the technical bid. |                 |                                  |  |  |
| 6.    | Main line of business, specialization and num of operation   | ber of years    |                                  |  |  |
| 7.    | Total number of permanent technical including their designation and qualification                            | employees       |                                  |  |  |
| 8.    | Details of Agreement/MoU for after sales so OEM (Copy must be provided with the offer)                       |                 | Date of Agreement:               |  |  |
|       |  |                 | Executed at:                     |  |  |
|       |  |                 | Executed by :                    |  |  |
| •     | horized Signatory of local e/authorized representative/dealer)   | (Authorize      | ed Signatory of VHF Antenna OEM) |  |  |
| Nam   | e:   | Name:           |                                  |  |  |
| Signa | ature:   | Signature :     |                                  |  |  |
| Place | and Date:  | Place and Date: |                                  |  |  |

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ANNEXURE-II List of Places for supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system at (100 Nos.) LPT DD sites

| S.            | Name of          | State         | S.       | Name of            | State       | S.          | Name of               | State               |
|---------------|------------------|---------------|----------|--------------------|-------------|-------------|-----------------------|---------------------|
| No.           |                  | ·             | No.      | Place              |             | No.         | Place                 | State               |
| $\frac{1}{2}$ | Alagadda         | Andra Pradesh | 35       | Gangawati          | Karnataka   | 69          | Malkangiri            | Odhísa              |
| 2             | Rajahmundry      | Andra Pradesh | 36       | Kolar              | Karnataka   | 70          | Nabarangpur           | Odhisa              |
| 3             | Madanapalle      | Andra Pradesh | 37       | Renebenur          | Karnataka   | 71          | Phulbani              | Odhisa              |
| 4             | Banka            | Bihar         | 38       | Udupi              | Karnataka   | 72          | Balasore              | Odhisa              |
| 5             | Buxar            | Bihar         | 39       | Kayamkulam         | Kerala      | 73          | Abohar                | Punjab              |
| 6             | Gopalganj        | Bihar         | 40       | Pathanamthitta     | Kerala      | 74          | Baran                 | Rajasthan           |
| 7             | Jamui            | Bihar         | 41       | Badwani            | MP          | 75          | Bhadre                | Rajasthan           |
| 8             | AIR<br>Darbhanga | Bihar         | 42       | Burhanapur         | MP          | 76          | Bhilwara              | Rajasthan           |
| 9             | Lakhisaria       | Bihar         | 43       | Khargone           | MP          | 77          | Bhinmal               | <del> </del>        |
| 10            | Sheikhpura       | Bihar         | 44       | Khurai             | MP          | 78          |                       | Rajasthan           |
| ΙI            | Nawada           | Bihar         | 45       | Kukdeshwar         | MP          | 79          | Dungarpur             | Rajasthan           |
| 12            | Siwan            | Bihar         | 46       | Murwara            | MP          | 80          | Hanumangarh<br>Jalore | Rajasthan           |
| 13            | Narayanpur       | Chhattisgarh  | 47       | Narsinghpur        | MP          | 81          | <del></del>           | Rajasthan           |
| 14            | Amreli           | Gujarat       | 48       | Panna              | MP          | 82          | Karanpur              | Rajasthan           |
| 15            | Botad            | Gujarat       | 49       | Piparia            | MP          | 83          | Khajuwala             | Rajasthan           |
| 16            | Chhote           | Gujarat       | 50       | Seoni              | MP          | 83          | Pali                  | Rajasthan           |
|               | Udaipur          | ,,            | 30       | beem               | IAIL        | 04          | Phalodi               | Rajasthan           |
| 17            | Dohad            | Gujarat       | 51       | Shajapur           | MP          | 85          | Sujangarh             | Rajasthan           |
| 18            | Modasa           | Gujarat       | 52       | Shyopur            | MP          | 86          | Pratapgarh            | Rajasthan           |
| 19            | Morvi            | Gujarat       | 53       | Nagda              | MP          | 87          | Kumbakonam            | TN                  |
| 20            | Rapar            | Gujarat       | 54       | Achalpur           | Maharashtra | 88          | Kachipuram            | TN                  |
| 21            | Jamjodhpur       | Gujarat       | 55       | Barshi             | Maharashtra | 89          | Davarkonda            | Telengana           |
| 22            | Tharad           | Gujarat       | 56       | Hingoli            | Maharashtra | 90          | Nalgonda              | Telengana           |
| 23            | Valsad           | Gujarat       | 57       | Mahad              | Maharashtra | 91          | Nirmal                | Telengana           |
| 24            | Veraval          | Gujarat       | 58       | Nandurbar          | Maharashtra | 92          | Ramagundam            | Telengana           |
| 25            | Khambalia        | Gujarat       | 59       | Pandharpur         | Maharashtra | 93          | Аигауа                | UP                  |
| 26            | Radhanpur        | Gujarat       | 60       | Rajapur/<br>Rajpur | Maharashtra | 94          | Deoria                | UP                  |
| 27            | Narnaul          | Haryana       | 61       | Chiplun            | Maharashtra | 105         |                       |                     |
| 28            | Jind             | Haryana       | 62       | Satana             |             | 95          | Fatehpur              | UP                  |
| 29            | Bhiwani          | Haryana       | 63       | Shirdi             | Maharashtra | 96          | Lalitpur              | UP                  |
| 30            | Godda            | Jharkhand     | 64       | Sironch            | Maharashtra | 97          | Naugarh               | UP                  |
| _             |                  |               |          |                    | Maharashtra | 98          | Car Nicobar           | Andman & Nicobar    |
| 31            | Bagalkot         | Karnataka     | 65       | Umarkhed           | Maharashtra | 99          | Mayabunder            | Andman &<br>Nicobar |
| 32            | Bidar .          | Karnataka     | 66       | Washim             | Maharashtra | 100         | Alipurduar            | West                |
| 33            | Belgavi          | Karnataka     | 67       | Bargarh            | Odhisa      | <u> </u>    |                       | Bengal              |
| 34            | <del></del>      |               | 68       |                    |             | <del></del> |                       |                     |
|               |                  | - Carnatura   | <u> </u> | Kenturapara        | Odhisa      | L l         | i                     |                     |

Note: The site locations mentioned above are tentative and the same may be changed later on by AIR Directorate.

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